

## AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended): A communication control system having a data link layer which executes data transfer on a logical channel for controlling packet transfer conducted by a plurality of said logical channels between nodes, comprising:

means for recording, in a descriptor for recording information regarding transfer by each logical channel, information including information regarding ~~the~~ an order of transfer by each said logical channel, wherein

said data link layer includes

means for executing data transfer by each said logical channel based on the information recorded in said descriptor including the information regarding the order of transfer by each said logical channel designated by said descriptor.

2. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled.

3. (original): The communication control system as set forth in claim 1, wherein  
said descriptor has  
an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and  
said data link layer includes  
means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

4. (original): The communication control system as set forth in claim 1, wherein  
said descriptor has  
an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and  
a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and  
said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

5. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

6. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

7. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

8. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

9. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

said data link layer includes

means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

10. (original): The communication control system as set forth in claim 1, wherein
- said descriptor has
- a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and
- a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and
- said data link layer includes
- means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and
- means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the

completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

11. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.



12. (original): The communication control system as set forth in claim 1, wherein

- said descriptor has
  - an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,
  - a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and
  - a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and
- said data link layer includes
  - means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,
  - means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and
  - means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be

monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

13. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be

monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

14. (original): The communication control system as set forth in claim 1, wherein
- said descriptor has
    - a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,
    - a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and
    - a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and
  - said data link layer includes
    - means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,
    - means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine

fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

15. (original): The communication control system as set forth in claim 1, wherein
- said descriptor has
  - an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,
  - a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and
  - a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and
  - said data link layer includes

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer,

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

16. (original): The communication control system as set forth in claim 1, wherein
- said descriptor has
- an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,
- a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer,

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be

monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

17. (original): The communication control system as set forth in claim 1, wherein  
said descriptor has  
an identification value and a monitoring identification value as numerical data,  
and  
said data link layer includes  
means for comparing, at the time of determination of said transfer starting  
condition, a value of said monitoring identification value of said descriptor of a waiting logical  
channel which is a logical channel on the side waiting for said transfer starting condition to be  
fulfilled and a value of said identification value of a preceding logical channel which is a logical  
channel on the side which conducts transfer prior to said waiting logical channel and whose  
transfer completion is said transfer starting condition for said waiting logical channel to  
determine fulfillment of said transfer starting condition only when the value of said monitoring  
identification value and the value of said identification value are equal.

18. (original): The communication control system as set forth in claim 1, wherein  
said descriptor has

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

an identification value and a monitoring identification value as numerical data,  
and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,  
and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

19. (original): The communication control system as set forth in claim 1, wherein

said descriptor has



an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and  
an identification value and a monitoring identification value as numerical data,  
and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

20. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

an identification value and a monitoring identification value as numerical data,  
and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

21. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

an identification value and a monitoring identification value as numerical data,  
and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

22. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

an identification value and a monitoring identification value as numerical data,  
and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose

transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

23. (original): The communication control system as set forth in claim 1, wherein

- said descriptor has
- an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,
- a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and
- an identification value and a monitoring identification value as numerical data,

and

- said data link layer includes
- means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer,
- means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

24. (original): The communication control system as set forth in claim 1, wherein

- said descriptor has
- an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,
- a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,
- a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and
- an identification value and a monitoring identification value as numerical data,

and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer,

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

25. (original): The communication control system as set forth in claim 1, wherein

said descriptor has

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

an identification value and a monitoring identification value as numerical data,  
and

said data link layer includes

means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer, and

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.



AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 09/717,293  
Attorney Docket No. Q61931

26. (currently amended): A method of controlling a communication control system having a data link layer which executes data transfer on a logical channel for controlling packet transfer conducted by a plurality of said logical channels between nodes, comprising the steps of:

the step of recording, in a descriptor for recording information regarding transfer by each logical channel, information including information regarding ~~the~~ an order of transfer by each said logical channel, and

the step of said data link layer of executing data transfer by each said logical channel based on the information recorded in said descriptor including the information regarding the order of transfer by each said logical channel designated by said descriptor.

27. (original): The method of controlling a communication control system as set forth in claim 26, further comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

the step of said data link layer of temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled.

28. (original): The method of controlling a communication control system as set forth in claim 26, further comprising:

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

the step of said data link layer of monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

29. (original): The method of controlling a communication control system as set forth in claim 26, further comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

30. (original): The method of controlling a communication control system as set forth in claim 26, further comprising:

the step of recording in said descriptor a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

the step of said data link layer of monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

31. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

32. (original): The method of controlling a communication control system as set forth in claim 26, further comprising:

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

the step of recording in said descriptor a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

the steps of said data link layer of:

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

33. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

the step of recording in said descriptor a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

34. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

the step of said data link layer of temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

35. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

36. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

the step of recording in said descriptor a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

the steps of said data link layer of:

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

37. (original): The method of controlling a communication control system as set forth in claim 26, comprising:



the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

the step of recording in said descriptor a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

38. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the step of said data link layer of comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

39. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

40. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the steps of said data link layer of:

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

41. (original): The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

42. (currently amended): A computer readable memory storing a control program of a communication control system having a data link layer which executes data transfer on a logical channel for controlling packet transfer conducted by a plurality of said logical channels between nodes,

said control program comprising:

the step of recording, in a descriptor for recording information regarding transfer by each logical channel, information including information regarding ~~the~~ an order of transfer by each said logical channel, and

the step of said data link layer of executing data transfer by each said logical channel based on the information recorded in said descriptor including the information regarding the order of transfer by each said logical channel designated by said descriptor.

43. (original): The computer readable memory storing a control program of a communication control system as set forth in claim 42,

said control program further comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

the step of said data link layer of temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled.

44. (original): The computer readable memory storing a control program of a communication control system as set forth in claim 42,

said control program further comprising:

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

the step of said data link layer of monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

45. (original): The computer readable memory storing a control program of a communication control system as set forth in claim 42,

said control program further comprising:

the step of recording in said descriptor a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

the step of said data link layer of monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

46. (original): The computer readable memory storing a control program of a communication control system as set forth in claim 42,

said control program comprising:

the step of recording in said descriptor a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

the step of said data link layer of temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

47. (original): The computer readable memory storing a control program of a communication control system as set forth in claim 42,

said control program comprising:

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the step of said data link layer of comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting



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condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

48. (new): The communication control system as set forth in claim 1, wherein data transfer is completed when a management layer confirms the data transfer.

49. (new): The method of controlling a communication control system as set forth in claim 26, wherein data transfer is completed when a management layer confirms the data transfer.

50. (new): The computer readable memory storing a control program of a communication control system as set forth in claim 42, wherein data transfer is completed when a management layer confirms the data transfer.

51. (new): The communication control system as set forth in claim 1, wherein a management layer designates a logical channel to transfer said descriptor to the data link layer,

said data link layer analyzes said descriptor, sets up an appropriate packet and outputs a message and data to a physical layer to execute data transfer to a node of a third party, and the management layer confirms the data transfer to complete the transfer.

52. (new): The method of controlling a communication control system as set forth in claim 26, wherein

a management layer designates a logical channel to transfer said descriptor to the data link layer,

said data link layer analyzes said descriptor, sets up an appropriate packet and outputs a message and data to a physical layer to execute data transfer to a node of a third party, and the management layer confirms the data transfer to complete the transfer.

53. (new): The computer readable memory storing a control program of a communication control system as set forth in claim 42, wherein

a management layer designates a logical channel to transfer said descriptor to the data link layer,

said data link layer analyzes said descriptor, sets up an appropriate packet and outputs a message and data to a physical layer to execute data transfer to a node of a third party, and the management layer confirms the data transfer to complete the transfer.

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54. (new): The communication control system as set forth in claim 1, wherein the information recorded in said descriptor also includes a number of a logical channel used to transfer said descriptor from a management layer to said data link layer.

55. (new): The method of controlling a communication control system as set forth in claim 26, wherein the information recorded in said descriptor also includes a number of a logical channel used to transfer said descriptor from a management layer to said data link layer.

56. (new): The computer readable memory storing a control program of a communication control system as set forth in claim 42, wherein the information recorded in said descriptor also includes a number of a logical channel used to transfer said descriptor from a management layer to said data link layer.